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### Chemical Analysis

- Atomic Absorption
- Alloy Type Sorting NDT
- Carbon Determination
- Carbon-Sulfur Determination
- Hydrogen Determination
- Mercury Determination
- Nitrogen Determination
- Oxygen Determination
- DC Plasma Quantitative
- DC Plasma Scan
- DSC Analysis
- FT-IR Spectroscopy
- Quantitative Analysis
- Semi-Quantitative Spectro Check
- Trace Element AAGF

### Failure Analysis and Consulting

- On-Site Inspection
- Professional Consultation
- Reverse Engineering
- Special Projects

# METALLIC AND NONMETALLIC TESTING CAPABILITIES

Sherry Laboratories, which was established in 1947, provides a complete array of reliable, high-quality analytical testing services. The network features eight labs in three states -- Indiana, Louisiana and Oklahoma. The facilities are organized to provide a single source for independent metallurgical, nonmetallic, polymer, environmental, bioassay, microbiological, and petroleum-related testing services that satisfy customers' precise specifications while meeting their scheduling requirements.

Sherry serves a variety of industries, including aerospace, automotive, defense, general manufacturing, medical, nuclear, petrochemical and refining. The laboratories combine to conduct more than 780,000 tests per year.

The following pages highlight many of the capabilities and varieties of tests that Sherry Laboratories can conduct for its customers. If you do not see your particular need addressed, please call 1-800-874-3563 (in Indiana) or 1-800-982-8378 (in Oklahoma) for assistance.

### Fastener Testing

- Fastener Axial Tension
- Fastener Proof
- Fastener Torque
- Fastener Wedge Tension
- Hardness
- Microstructure
- Shear Test, Rivet
- Stress Rupture
- Tension

### Heat Treatment and Sample Conditioning

- Heat Treatment -- Air/Atmosphere

### Mechanical Testing

- Bend
- Bond Lap Shear
- Bond Tension
- Charpy Impact
- Coating Adhesion
- Coiling Wire
- Creep Test
- End Quench Hardness Test -- Jominy

### Mechanical Testing (continued)

- Fracture of Weld
- Hydrogen Embrittlement
- Load Test
- Macrohardness
- N-Value
- R-Value
- Scratch Hardness
- Stress Rupture
- Sustained Load
- Tension, Elevated Temperature
- Tension, Room Temperature
- Tension, Room Temp., Full Section Tube
- Tension, Room Temperature, Wire
- Tube Flaring
- Tube Flattening
- Wrapping Test of Wire

## Metallography and Corrosion Testing

- Film and Digital Photography
- 10-Day Moist Ammonia
- Corrosion Exposure
- Corrosion Susceptibility -- ASTM A262
- Corrosion Susceptibility of Aluminum
- Etch Inspection for Grain Flow/Macro
- Exfoliation
- Image Analysis
- Macro-Etch NDT
- Metallographic Exam -- DX GS, Heyn, % P.F.C.
- Metallographic Exam -- Alpha Case, ECG, ECM, EDM
- Metallographic Exam -- Grain Size, Plate and Structure
- Metallographic Exam -- Inclusion Rating
- Metallographic Exam -- Plasma Coating
- Metallographic Exam -- by Replica
- Microhardness
- SEM/EDS
- Stress Corrosion

## Physical Testing

- Calibrations
- Chisel
- Coating Resistivity
- Coating Weight Determination
- Conductivity
- Dimensional
- Particle Size Distribution
- Peel Test of Brazed Joint
- Plating
- Specific Gravity Test
- Surface Finish
- Taber Abrasion
- Thermal Expansion (TMA)
- Visual Inspection

## Plastics Testing

- ASTM D256 Impact Resistance IZOD
- ASTM D543 Resistance of Plastics to Chemical Regents
- ASTM D568 Rate of Burning
- ASTM D570 Water Absorption of Plastics
- ASTM D618 Conditioning Plastics and Electrical Insulating Materials for Testing
- ASTM D635 Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position
- ASTM D638 Tensile Properties of Plastics
- ASTM D695 Compressive Properties of Rigid Plastics
- ASTM D732 Shear Strength of Plastics by Punch Tool
- ASTM D746 Brittleness Temperature
- ASTM D785 Rockwell Hardness of Plastics and Electrical Insulating Materials
- ASTM D790 Flexural Properties and Unreinforced and Reinforced Plastics and Electrical Insulating Materials
- ASTM D792 Specific Gravity and Density of Plastics by Displacement
- ASTM D882 Tensile Properties of Thin Plastic Sheetting
- ASTM D952 Bond or Cohesive Strength of Sheet Plastics and Electrical Insulating Materials
- ASTM D1238 Flow Rate by Extrusion Plastometer of Thermoplastics
- ASTM D1239 Resistance of Plastic Films to Extraction by Chemicals
- ASTM D1621 Compressive Properties of Rigid Cellular Plastics

## Plastics Testing (continued)

- ASTM D1623 Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
- ASTM D1708 Tensile Properties of Plastics by use of Microtensile Specimens
- ASTM D2240 Durometer Hardness
- ASTM D2583 Barcol Hardness
- ASTM D2584 Ignition Loss of Cured Reinforced Resins
- ASTM D2794 Gardner Impact
- ASTM D3801 Flammability

## Rubber Testing

- ASTM D297 Rubber Analysis
- ASTM D395 Compressive Test
- ASTM D412 Rubber Properties in Tension
- ASTM D471 Effects of Liquids
- ASTM D573 Rubber Deterioration in an Air Oven
- ASTM D575 Rubber Properties in Compression
- ASTM D624 Rubber Property -- Tear Resistance
- ASTM D2240 Rubber Property -- Durometer Hardness
- ASTM D2702 Rubber Compounds
- ASTM D3677 Rubber Identification

## Simulated Environmental Testing

- Humidity
- Moist Ammonia
- Salt Spray
- Scribe/Tape Test
- Xenon Arc UV